WHAT IS CLAIMED IS:

1. A semiconductor manufacturing apparatus comprising:

a calculation unit including at least one computer for processing semiconductor design information;

a control unit for controlling radiation of an electron in accordance with a processing result of the semiconductor design information;

a writing unit for radiating an electron in accordance with instructions of the control unit; and

at least one storage device,

wherein a communication is permissible between the storage device, the calculation unit, the control unit, and the writing unit, and wherein the semiconductor manufacturing apparatus further includes a communication pass through which the storage device can be controlled.

2. A semiconductor manufacturing apparatus according to claim 1, wherein the calculation unit includes at least one computer for dividing the semiconductor design information into a plurality of areas, at least one computer for processing information with respect to the divided areas, and at least one computer for processing a result after processing the information.

3. A semiconductor manufacturing apparatus according to claim 2, wherein the computer for dividing the semiconductor design

information into a plurality of areas sends a command about information of the divided areas to at least one computer, and wherein the computer which receives the command refers to the semiconductor design information and processes the information of the divided areas.

4. A semiconductor manufacturing apparatus according to claim 2, wherein the computer for dividing the semiconductor design information into a plurality of areas generates plurality pieces of divided design information and sends a command about the divided design information to the computer for processing the information with respect to the divided areas, and wherein the computer which receives the command refers to the divided design information and processes information with respect to the divided design information.

5. A semiconductor manufacturing apparatus according to claim 2, wherein the semiconductor design information is divided according to an operating range of a stage for placing and moving a wafer and a deflection area which permits electron beam radiation, and wherein at least one computer for processing information with respect to the divided areas generates writing information such that the writing unit traces a writing locus to effectively execute radiation of an electron.

6. A semiconductor manufacturing apparatus according to

claim 2, wherein the semiconductor design information is divided into meshes having an arbitrary width, and wherein at least one computer for processing information with respect to the divided areas generates writing information such that the writing unit traces a writing locus to effectively execute radiation of an electron.

7. A semiconductor manufacturing apparatus according to claim 5, wherein the writing information is stored with the storage device as a linear logic space and in order of a writing locus such that the writing unit effectively executes radiation of an electron.

8. A semiconductor manufacturing apparatus according to claim 6, wherein the writing information is stored with the storage device as a linear logic space and in order of a writing locus such that the writing unit effectively executes radiation of an electron.

9. A semiconductor manufacturing apparatus according to claim 5, wherein the writing information consists of a plurality pieces of area information each representing an area and a plurality pieces of pattern information each representing a pattern included in a piece of area information, and wherein the writing information is generated in such a manner that plurality pairs of area information and pattern information corresponding to the area

information are inputted as fine writing information to be arranged in order such that the fine writing information allows the writing unit to effectively execute radiation of an electron.

10. A semiconductor manufacturing apparatus according to claim 6, wherein the writing information consists of a plurality pieces of area information each representing an area and a plurality pieces of pattern information each representing a pattern included in a piece of area information, and wherein the writing information is generated in such a manner that plurality pairs of area information and pattern information corresponding to the area information are inputted as fine writing information to be arranged in order such that the fine writing information allows the writing unit to effectively execute radiation of an electron.

11. A semiconductor manufacturing apparatus according to claim 5, wherein the writing information consists of a plurality pieces of area information each representing an area and a plurality pieces of pattern information each representing a pattern included in a piece of area information, and wherein the writing information is generated by inputting a row of area information and a row of pattern information in such a manner that the row of area information is inputted in order such that the writing unit effectively executes radiation of an electron and the row of pattern information is outputted corresponding to the row of area information.

12. A semiconductor manufacturing apparatus according to claim 6, wherein the writing information consists of a plurality pieces of area information each representing an area and a plurality pieces of pattern information each representing a pattern included in a piece of area information, and wherein the writing information is generated by inputting a row of area information and a row of pattern information in such a manner that the row of area information is inputted in order such that the writing unit effectively executes radiation of an electron and the row of pattern information is outputted corresponding to the row of area information.

13. A semiconductor manufacturing apparatus according to claim 2, wherein results after processing the information are stored in the storage device, and wherein the control unit and the writing unit are provided in plurality pairs so that each of the pairs parallelly executes the processes.

14. A semiconductor manufacturing apparatus according to claim 1, comprising:

a storage provider having at least one storage device and whose business is to offer lease and management of the storage device; and

a service provider having at least one computer and whose business is to lease and management of the computer;

wherein the control unit and the writing unit are interconnected through a communication pass for interconnecting

a storage device or through a communication pass which allows protocol for interconnecting a storage device to be passed therethrough.

15. A semiconductor manufacturing apparatus according to claim 1, wherein shot information for electron beam radiation utilized in the writing unit is stored in a storage device, so that writing states can be checked before actually radiating the electron beam.